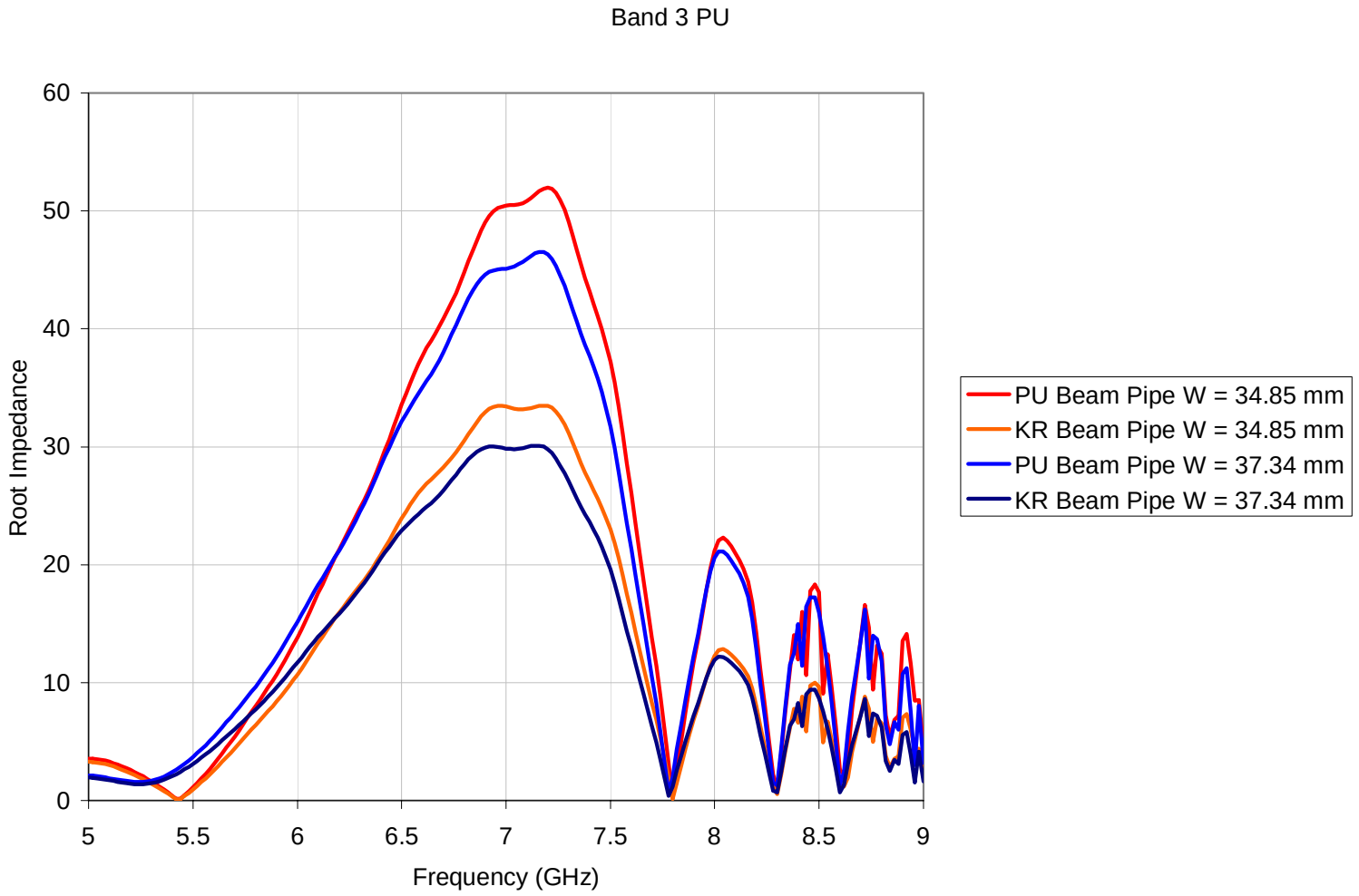
Report by Pbar

- McGinnis
  - Calculation of Band 3 beam-pipe width increase



Report by RFI

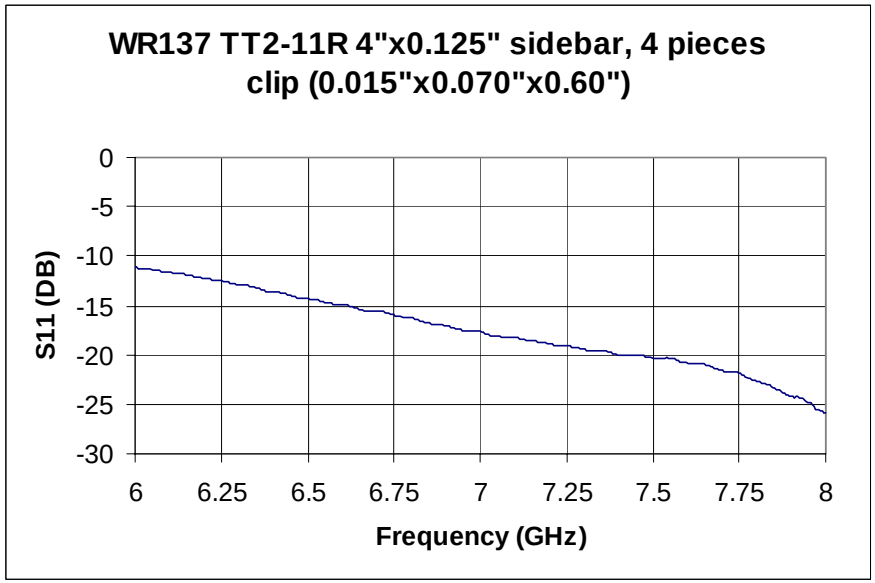
- Ding Sun
  - Commercial launchers ordered. Will be here by mid-December. Ordered 3 for each band
  - Still awaiting quote on Magic T's. Delivery time 4-5 months
  - Absorber
    - 1. Simulated and measured "Clip" (0.015" x 0.07"x0.6") design
      - Reflection increase: negligible
      - Attenuation decrease: less than 1 db (band 3, simulation and measurement), 2.5 db (band 2, measurement)
    - 2. Back mount option: simulated.
    - 3. Checked HFSS with measurement at band 3 (WR137): 3.5 db difference in reflection at lower frequency end.) Should be very cautious (keep some margin) on HFSS results
    - 4. General characteristic performance of side bar absorber (0.065" – 0.125" thick, inside waveguide)
      - Absorption/Reflection: O.K. at most part of each band.
      - Reflection is higher at lower end of each band. Absorption is lower at upper end of each band

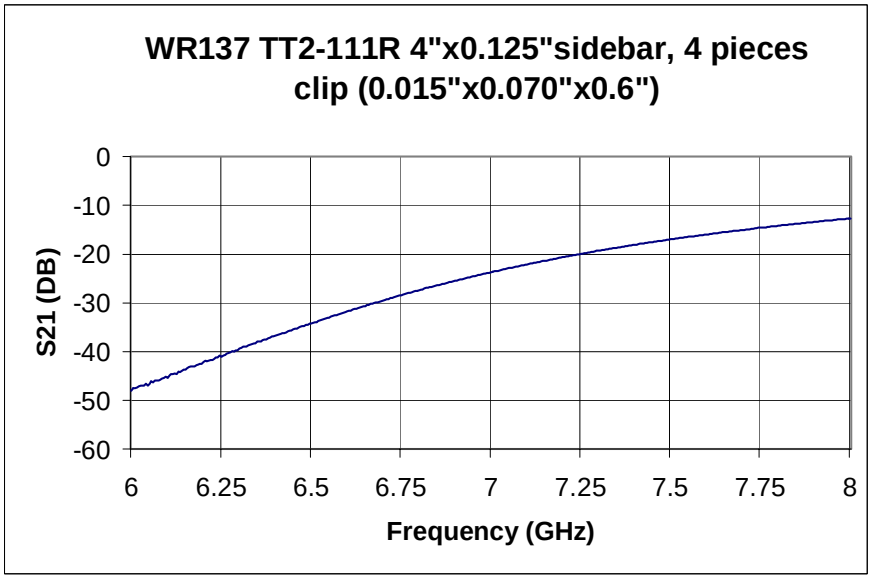
Report by RFI

- Ding Sun
  - Absorber (continued)
    - 5. 0.125” (4” side bar) Simulation results.
      - At lower end of each band: reflection: –14 --16 db (this number has to be subtracted by ~-3.5 db, see paragraph 3.)
      - At upper end of each band: absorption: ~ -14 db
    - 6. 0.065-0.07” (4” side bar) Simulation results
      - At lower end of band 2 &3: reflection : ~ -22db (this number has to be subtracted by ~-3.5 db, see paragraph 3.)
      - At upper end of band 2&3: absorption: ~ -7 – 8 db
    - 7. Mixed thickness or tapered end piece
      - Goal (4” side bar):
        - » reflection at lower band: -19db,
        - » absorption at upper band: ~-8-10 db.
      - Simulated for band 2 (0.065”x1”, 0.125”x 2”, 0.065”x1”), It looks O.K.:
        - » reflection below ~-22 db full band,
        - » absorption at upper end: -12 db
      - Need to do: similar simulation for band 1 and 3, measurement at band 2 and 3. (~ 1 week.)
      - Do not have WG components for band 1. (ordered, 4-6 weeks delivery.)

Report from RFI

- Ding Sun
  - Absorber (continued)
    - Measurement results for “clip” design
- Cullerton
  - Circulators ordered 10-12 weeks
  - Working on RF design of Petter hybrid





Report by Mechancial Support

- Misek
  - Have enough Type N feed-thrus to do 21 flanges
  - Need 12 flanges
- Tinsley
  - Drafter is back 70% time
  - Rough design of Absorber clip assemblies
  - Rough layout of arrays in tank
    - Waiting for input on launch position and array location, absorber design
  - Bake out test
    - Working on Empty chamber calibration
      - Ended empty bake
      - Finish characterizing empty tank at elevated temps by end of next week.
    - Should have sample tests done before Xmas
    - Should be able to give OK on absorber ordering by Dec. 15

Discussions

- Look into .141” flexible coax for connections inside tank.

Assignments

- Ding Sun
  - Continue on Absorber Design
  - Get SMA launcher dimensions
- Ed Cullerton
  - Find suitable termination resistors
  - Continue on hybrid design
- Dave Tinsley
  - Iron out details of array location with McGinnis & Sun
  - Continue on Tank Design
  - Continue on Bake-out test

- Next Meeting will be on Fri. Dec. 7 at 10 am in the Penthouse